

Title (en)  
Internal combustion engine

Title (de)  
Brennkraftmaschine

Title (fr)  
Moteur à combustion interne

Publication  
**EP 1236874 A3 20030521 (EN)**

Application  
**EP 02002390 A 20020131**

Priority  
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Abstract (en)  
[origin: EP1236874A2] The invention increases a thermal efficiency by increasing the degree of constant volume of a fuel-air mixture at the time of combustion in an internal combustion engine. To achieve this, in an internal combustion engine in which a piston 16 slidably fitted in a cylinder 15 is connected to a crankshaft 19 via a connecting rod 21, a cylinder head 12 in which a combustion chamber 22 is defined is disposed between the piston 16 and the crankshaft 19. As compared with a prior art internal combustion engine in which a combustion chamber is disposed opposite to a crankshaft with a piston put therebetween, a ratio of an increased amount of the volume of the combustion chamber 22 to an increased amount of a crank angle of the piston 16 from the top dead center can be suppressed at a small value. As a result, it is possible to increase the degree of constant volume of a fuel-air mixture at the time of combustion and hence to increase a thermal efficiency of the internal combustion engine. Also, since a tensile load is applied to a connecting rod 21 in an expansion stroke, it is possible to lower a strength of the connecting rod 21 and hence to reduce the weight thereof as compared with the prior art internal combustion engine in which a compressive load is applied to a connecting rod.  
<IMAGE>

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**Y02T 10/12** (2013.01 - EP US); **Y02T 10/30** (2013.01 - EP US)

Citation (search report)  
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**EP 1236874 A2 20020904**; **EP 1236874 A3 20030521**; **EP 1236874 B1 20070606**; CN 1184412 C 20050112; CN 1373289 A 20021009;  
DE 60220461 D1 20070719; DE 60220461 T2 20070920; JP 2002327624 A 20021115; US 2002117144 A1 20020829; US 6763796 B2 20040720

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